ASPIRIN DESENSITIZATION

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- Head of Aspirin Desensitization Center
- Background
  - Pediatrician 1979
  - Allergist 1986
  - Allergy and Asthma Specialists 1990

Interest in Aspirin Desensitization

Financial disclosure

- I have no commercial conflicts of interest and have no financial relationships with a commercial entity.

Postgraduate Training

- Returning Scholar’s Grant ACAAI 2008
- Scripps Clinic LaJolla Ca.
- Drs Stevenson and Simon
Outline of Today’s Talk

• Historical Perspective
• Define the Aspirin sensitivity triad
• Clinical cases
• Discuss the process of desensitization
• Discuss the goals of desensitization

Audience’s Goals

• Ability to diagnose the various NSAID problems
• Recognize proper candidates for desensitization
• Understand the role that desensitization may play in the care of your patients

My personal Goals

• Catch some of my fire
• “Sexy” alternative to heavy duty medications

Aspirin

• Known since antiquity
• Plant extract of Willow bark
• Hippocrates 460-377 BC
• Synthesized in the 1850’s
• Marketed in 1897
History

• 1st case of Aspirin sensitivity in asthma described in 1902

• 1968 Samter and Beers described the triad of asthma, aspirin sensitivity, and nasal polyps
  • Known as Samter’s Triad

Case Study

• MB 45y.o Black Female
  – Asthma for 10 years duration

Talking Point

• Not a childhood disease
• Often begins in adulthood
• Average age 30
• Female : male 3:2

Case Study

• MB 45y.o Black Female
  – Asthma for 10 years duration
  – Long history of allergic Rhinitis
Talking Point

- Not necessarily atopic

Case Study

- MB 45y.o Black Female
  - Asthma for 10 years duration
  - Long history of allergic Rhinitis
  - Developed recurrent sinusitis and nasal polyposis
  - Then noted to have angioedema with Aspirin or Advil ingestion

Talking point

- Symptoms may appear sequentially
  - Asthma first
  - Polyps discovered later
  - Aspirin reactions even later

Case Study

- MB 45y.o Black Female
  - Asthma for 10 years duration
  - Long history of allergic Rhinitis
  - Developed recurrent sinusitis and nasal polyposis
  - Then noted to have angioedema with Aspirin or Advil ingestion
  - Even though Aspirin avoided she has had 10 polypectomies
Talking point

- These people can be ill!!
- My personal high patient with 25 polypectomies!!

A. E. R. D.

A spirin
Exacerbated
Respiratory
Disease

A. E. R. D.

MB had ongoing disease (asthma and continuing nasal polyps) in spite of avoiding aspirin
Not caused by aspirin, just exacerbated

A. E. R. D.

- Asthma
- Nasal polyposis (eosinophilic hyperplastic rhinosinusitis)
- NSAID reaction
A. E. R. D.

• Symptoms
  – Asthma
  – Nasal congestion
  – Polyps
  – Anosmia
  – Urticaria
  – Angioedema
  – Blended reaction

A. E. R. D.

• All NSAIDs can cause this
  – Aspirin
  – Naproxen
  – Indomethacin
  – Ketrolac
  – Diclofenac
  – Toredol

Psuedoallergy

• NSAID reactions are not IgE mediated
• Triggered by structurally distinct medications
  – Inhibit the Cox 1 enzyme

Prevalence

• <5% of the general asthmatic population
• 20%-40% of steroid dependent asthmatics
Case Study

• GW 58 y.o. white male
  – History of hives with Advil ingestion several years ago
  – No asthma or rhinitis history

Case Study

• GW 58 y.o. white male
  – Needs cardio protection with low dose aspirin

Case Study

• GW 58 y.o. white male
  – Needs NSAID therapy for arthritis

Goals

• Allow the use of daily Aspirin therapy
• Allow the use of any NSAID, even if Aspirin taken
Aspirin Desensitization

• Andrew Szceklik  Poland

Aspirin Desensitization

• Stevenson and Simon (LaJolla Ca.)
  – 25 years experience
  – > 2500 patients desensitized

Aspirin Desensitization

• Gradually increase the dose of Aspirin
  – Tolerate Aspirin
  – Lessen the burden of AERD
  – Tolerate other NSAIDS

Aspirin Desensitization

• 2-3 day in office procedure
Aspirin Desensitization

• Gradually increase dose of PO Aspirin
  – 20
  – 40
  – 81 (cardio protective dose)
  – 162
  – 325 (standard Aspirin)
  – 650 (2 tabs)

Aspirin Desensitization

• Monitor (at least Q hour)
  – Vital signs
  – Lung functions
  – Pulse Ox
  – Nasal airflow
  – Physical examination

Aspirin Desensitization

• Patients are EXPECTED to react

Aspirin Desensitization

• Patients are EXPECTED to react
  – Usually react at the 81 mg dose
Aspirin Desensitization

• Patients are EXPECTED to react
  – Common reactions are
    • Increased nasal congestion
    • Chest tightness
    • Asthma
    • Hives

• Patients are EXPECTED to react
  – Less common reactions
    • Angioedema
    • Laryngeal edema
    • Abdominal pain
    • Hypotension

Aspirin Desensitization

• Patients are EXPECTED to react
  • Usually one reaction
  • Second reaction milder than first if it occurs

Goals of Aspirin Desensitization

• Significant improvement in upper and lower airway symptoms
Goals of Aspirin Desensitization

• Reduced polyp formation

• Reduced need for oral steroids

• Reduced frequency of sinusitis

• 84% tolerate long term Aspirin therapy
  – 87% have good or excellent clinical improvement
Aspirin Desensitization

• Must maintain Aspirin therapy to maintain improvement
  – If not clinical course reverts

• Reaction if Aspirin restarted

Aspirin Desensitization

• Must maintain Aspirin therapy to maintain improvement
  – Lose desensitization if Aspirin not taken for 48 hours

• Surgical protocol to allow continued desensitization with surgery
Summary

• Aspirin desensitization exists as a therapeutic option for our patients

Summary

• Need to identify patients who may benefit from Aspirin desensitization
  – AERD
  – Cardio protection
  – NSAIDS for other problems

Summary

• Recognize the safety of this procedure
  – Almost all can be desensitized

Summary

• Recognize the safety of this procedure
• All patients expected to react
  – Graduated dosing means milder reaction
  – Pre-treatments mean milder reaction
Summary

• Recognize the safety of this procedure
  – No one has ever died from Aspirin desensitization
  – 2/2500 hospitalized

Summary

• Aspirin desensitization allows better disease control with less medications ESPECIALLY less steroids